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ABSTRACT

A study investigated the effect of the hiring process as a quality control measure in relation to the academic aptitude of classroom teachers. American College Test (ACT) scores of teachers in Kansas were analyzed to determine if employment of teachers took into consideration ACT scores. There was no significant difference in ACT scores of employed teachers and education graduates in general. However, when the subjects were divided into elementary or secondary education, scores of hired secondary school teachers were significantly higher than those of all secondary school graduates. It is noted that use of this mean as a measure of employability may be deceptive. In the case of such academic subjects as English, foreign language, the sciences, and mathematics, the mean scores were so high for all graduates that little discriminiation would be expected to occur. (CB)

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THE HIRING PROCESS AS A QUALITY CONTROL MEASURE

MYTH OR REALITY?

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The intellectual qualities and training of prospective teachers has been a source of controversy in the nation for a number of years. Those who have been in the profession for some time can remember the frantic post-Sputnik efforts to retrain teachers during the early 1960s, with great emphasis placed upon further academic knowledge as opposed to pedogogical training.

Then, during the late 60s and early 70s an almost complete reversal occurred. During both of these earlier periods, there was a strong, but subtle allegation that the training and/or intellectual capacity of teachers was lacking when compared to the product of an earlier time.

The report by the National Commission on Excellence in Education in 1983 gave rise to a new round of criticism of the public schools not only in their own right, but also as they impact higher education. Specifically, the report discussed declines in college entrance examination scores and related those declines to, among other things, competence of students entering teacher training programs (National Commission on Excellence, 1983). The reaction to the report has been severe, leading to radical proposals for change in teacher education programs. Suggestions range from greatly limiting pedogogical studies in pre-service programs to preparing students with two years of general education in college, and completion of their preparation on the job. Further, there is a suggestion that these on-the-job programs be administered by local school districts through apprentice style programs (Chronicle of Higher Education, October 3, 1984). In many states the requirement for traditional college credit for teacher recertification has been supplanted by non-credit inservice training programs sponsored by agencies other than schools of education (Engelgau, 1984). All of these suggestions move away from traditional practices involving schools of education, in the name of placing "better" teachers in classrooms.

Current evidence indicates that those who prepare to staff our public schools consistently score lower on college entrance examinations than do their non-education counterparts (Arnold, Denemark, Nelli, Robinson and Sagen, 1977; Ornstein and Miller, 1980; Weaver, 1979). Based upon their experiences in North Carolina, Schlechty and Vance (1981) state categorically that those who enter teacher training programs are less academically equipped than most other college majors, and that the most capable of this cohort are likely to leave the profession early.

A recent study of ACT scores of graduates of teacher training programs in the public universities of Kansas found a startling similarity to earlier ACT studies conducted in other states using proposed majors of high school seniors. In the Kansas study as in the earlier research, education students as a group scored near the bottom of all college major fields on their entrance examinations (Skillett, Tompkins, Ervay & Heath, 1983).

Weaver (1981) studied teacher education students' GRE scores and found that their scores dropped at a more rapid rate in the period 1970-1975 than did scores of students in other professions. In an earlier study, Weaver (1978) found that schools of education appeared to be caught in a cycle of rapidly declining applications for admission, falling test scores, and declining enrollments. Moreover, he suggested that overall entrance standards declined more at those institutions featuring teacher training programs than at others.

There seems to be little ground on which to challenge the logic of the research of critics of public education. One gap which does exist in the literature, though, is the fact that the preponderance of research has been based upon college entrance scores of high school students who indicate education as an intended major, with the results being generalized to the classroom

teachers of the nation. One would think that the overabundance of graduates for a limited number of positions should act as a powerful quality control measure in itself. The recruiting process by its very nature should result in procuring the best available talent. The literature questions whether this in fact is happening. Weaver (1978) and Perry (1981) suggest that often the most academically competent teachers are not offered classroom positions. Perry further criticized current practices for identifying competent teachers, expressing the opinion that alleged grade inflation and useless student evaluation techniques compound rather than resolve the problem.

STUDY DESIGN

This study tested the effect of the hiring process as a quality control measure in relation to the academic aptitude of classroom teachers. A list of the names of the 9891 graduates of the Kansas Regents' institutions during 1983 was submitted to the ACT National Data Bank in Iowa City, Iowa, to match against ACT student records for the years 1976-79. A total of 6645 (68%) student records were returned which included 1047 (73%) of the 1434 education graduates. These 1047 records were subdivided and analyzed by level of preparation (elementary vs. secondary) and secondary major fields. These data were then matched to a state department data base which lists teachers actually employed in classrooms and returned records of 227 1983 graduates who were employed in the Kansas schools for the 1983-84 school year. A analysis similar to that conducted upon all 1983 graduates was conducted on these data.

RESULTS

Columns 1 and 2 of Table 1 report the ACT composite scores of 1047 public university teacher education graduates in 1983, while columns 3 and 4 report similar data for those who actually entered the state's classrooms at the

TABLE 1

COMPARISON OF MEAN ACT COMPARISON SCORES FOR ALL 1983 GRADUATES OF KANSAS REGENTS' INSTITUTIONS TEACHER EDUCATION PROGRAMS WITH SCORES OF THOSE GRADUATES ACTUALLY TEACHING IN 1983-84

FIELD	MEAN ALL GRADUATES	RANGE	MEAN CLASSROOM TEACHERS	RANGE	MEAN NON-EDUCATION COUNTERPARTS
Combined El. & Sec.	18.9	7-32	19.3	9-31	--
Elementary	18.2	7-30	18.5	9-29	--
All Secondary	19.3	9-32	20.2	12-31	--
Art	17.9	12-24	19.3	17-23	20.6
Biology	19.0	11-29	24.7	23-26	24.1
Business Ed.	19.7	14-27	19.7	15-27	21.2
English	22.2	14-29	23.6	18-27	22.7
Foreign Lang.	22.7	20-28	21.5	20-23	23.5
Home Econ.	18.4	10-29	17.3	15-22	18.6
Industrial Arts	17.3	10-28	14.5	12-20	18.0
Mathematics	25.7	18-31	25.2	18-31	26.5
Physical Educ.	16.7	9-28	18.4	12-28	--
Physical Science	21.8	16-28	25.7	25-27	23.7
Social Science	18.3	12-25	19.8	12-24	21.8
Speech	19.9	12-26	19.7	17-24	--
Music	21.0	9-32	20.6	14-30	20.6

beginning of the 1983-84 school year. For comparative purposes, mean composite scores of the 1983 non-education graduates are listed in Column 5 for those fields in which there was an analogous major. Analysis of composite scores by t-testing indicated no significant difference between overall mean scores of those teachers employed and education graduates in general. Decomposition of the group indicated that while this was true of elementary teachers, scores of secondary graduates who obtained employment were significantly higher ($t=1.82$, $p<.04$) than those of all secondary graduates.

IS THE HIRING PROCESS BASED ON ABILITY?

Looking at the secondary data by subcategory it appears that the hiring process did act as a quality control device in approximately half of the teaching fields in terms of composite means. However, use of the mean as a measure of employability may be deceptive. In the case of the "solid" academic subjects such as English, foreign language, the sciences, and mathematics, the mean scores were so high for all graduates that little discrimination would be expected to occur.

Of more interest in this case is the range of scores. If the hiring process does act as a quality control device it should be shown in this statistic, since, as lower ability persons are eliminated, the range should narrow. Indeed, this does seem to occur and is most pronounced in the solid academic fields. It appears that in the sciences the maximum selectivity occurs, with only the most capable graduates being hired. In mathematics, in which there is a critical teaching shortage, the range of all graduates is high, and it appears that the job market is robust enough that the entire range of abilities represented moved into the job pool. English and speech indicate selectivity with a highly restricted range, although the mean composite score in speech dropped slightly in comparison with that of all graduates.

An interesting phenomenon is the fact that range restriction actually occurred in two dimensions. In all fields except mathematics, physical education and business education the top of the range of all graduates was not represented in the pool of classroom teachers. It is interesting to speculate about this.

Given the nature of a scholastic ability examination, some would argue that the scores achieved in the final year of high school have little value in determining future academic performance. However, Sawyer (1984) suggests that scores are stable and effective predictors of future G.P.A. If this is so, the consistent truncation of the top of the ability range among secondary classroom teachers would support the notion that the most able teacher education graduates do not enter public education.

A more practical explanation may center upon the options available to the high achieving education graduate. It seems quite possible that the opportunity to apply one's education in the more lucrative world of business and industry acts as a force to skim the most capable graduates from the job applicant pool. Confirmation of this can be noted by examining the fields in which the greatest truncation of the top of the range occurs -- industrial arts, home economics, and foreign languages. In these fiels the actual coursework in the major field approximates the program of the non-education student, with more required courses in the major, and job opportunities in the business world exist which allow the capable student to compete with non-education graduates. On the other hand, in teaching fields where the education major receives a more general preparation in comparison to the highly specialized liberal arts major more valued by industry, (e.g. physical science vs. chemistry), attenuation does occur, but it is much less pronounced.

Of obvious concern is the other end of the range values. It is apparent that while the employment process screens on the basis of ability, in some

cases (seven of the thirteen fields of secondary education, and elementary education) contain individuals who did enter the classroom and who scored considerably below the mean of all Kansas high school graduates (18.6), while only science and foreign language teachers all scored above this point. In this regard, it appears that the hiring process does not discriminate adequately to be relied upon as a quality control.

CONCLUSION

To expect the employment process to provide quality control for beginning teachers is probably more of a hope than a reality. In the solid academic areas at the secondary level, there is some validity to the belief. Possibly because of other employment opportunities, the employment process in secondary teaching selects teachers from the graduate pool that represents a central range of talent rather than the best academic talent available. In elementary education, the largest employment field, the employment process results in an almost random selection of the entire range of talent, rather than selection of the brightest.

Further, if high academic ability, as measured by entrance examinations, is truly a desired attribute of the outstanding teacher, it would seem that standards built upon these scores must be formally implemented at the university level rather than assuming that an academic Darwinism will occur at the time of employment.

Reference List

Arnold, D.C., Denemark, G., Nelli, E.R., Robinson, A., and Sagan. E.L. (1977). Quality control in teacher education: some policy issues. Washington, D.C.: American Association of Colleges for Teacher Education.

Brubacher, John. and Rudy, Willis (1976). Higher education in transition. New York: Harper & Row.

Callahan, Raymond E. (1962). Education and the cult of efficiency. Chicago: University of Chicago Press.

Cantrell, R.P., and Stenner, A.J., and Katzenmeyer, W.G. (1977). Teacher knowledge, attitudes, and classroom teaching correlates of student achievement. Journal of Educational Psychology, 172-179.

Conant, James B. (1959). The American high school today. New York: McGraw-Hill.

Cornett, J.D. (1969). Effectiveness of three selective admission criteria in predicting performance of first-year teachers. Journal of Educational Research, February, 47-50.

Eash, M.J. and Rasher, S.P. (1977). An evaluation of changed inputs on outcomes in teacher education curriculum. New York: American Education Research Association Annual Meeting. (ERIC Document Reproduction Service No. Ed 150 203)

Emmer, E.T., Evertson, C.M. and Anderson, L.M. (1980). Effective classroom management at the beginning of the school year. The Elementary School Journal, May, 219-231.

Engelgau, Donna (1984, Oct. 3). Teacher-training laboratory to get $7.7-million from U.S. The Chronicle of Higher Education, p. 16.

Fadiman, Clifton (1959). The case for basic education. In James E. Koerner (Ed.), The case for basic education (pp. 3-14). Boston: Little, Brown & Co.

Hamachek, Don (1969). Characteristics of good teachers and implications for teacher education. Phi Delta Kappan, February, 341-45.

Meyer, Adolphe E. (1957). An educational history of the American people. New York: McGraw-Hill.

National Commission on Excellence in Education (1983). A nation at risk: The imperative for educational reform. (Stock No. 065-000-00177-2). Washington, D.C.: U.S. Government Printing Office.

N.J. approves new plan for certifying teachers (1984, Oct. 3.). The Chronicle of Higher Education, p. 3.

Orstein, A.C., and Miller, H.L. (1980). Looking into teaching. Chicago: Rand McNally.

Perry, N.C. (1981). New teachers: Do "the best" and get hired? Phi Delta Kappan, 63, 113-114.

Sawyer, Richard (1984). Determining minimum sample sizes for multiple regression grade prediction equations for colleges. Research report no. 83. Iowa City, IA.: ACT Publications.

Schlechty, P.C., and Vance, V.S. (1981). Do academically able teachers leave education? The North Carolina case. Phi Delta Kappan, October, 106-112.

Simon, P., and Asher, J.W. (1964). The relationship of variables in undergraduate school and school administrators' ratings of first-year teachers. Journal of Teacher Education, September, 293-302.

Skillett, Jack, Tompkins, L.D., Heath, Ray, and Ervay, Stuart (1983). An analysis of ACT scores of 1973 and 1983 graduates of Kansas Regents' institutions. Emporia, KS: Emporia University Press.

Weaver, W.T. (1981). The talent pool in teacher education. Journal of Teacher Education, 32, 32-36.

Weaver, W.T. (1979). In search of quality: The need for talent in teaching. Phi Delta Kappan, 62, 29-32,46.

Weaver, W.T. (1978). Educators in supply and demand: Effects on quality. School Review, 86, 552-593.